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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/998,750  
Filing Date: November 30, 2001  
Appellant(s): BAYER ET AL.

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George H. Gates  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 08/11/2009 appealing from the Office action mailed 03/13/2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Cook (US 6,631,360).

Claim 1, Cook teaches:

A computer-implemented method of creating customer promotion response models for use in customer relationship marketing, comprising.

(a) generating in a computer an input data set for the response model, wherein the input data set is generated using an Analytic Data Set Template containing one or more Analytic Variables that include both primitives (see col 9, lines 35-45; col 12, lines 5-30; “data source, such as buy or no buy data”) that are base variables and conditions that are predicates, aggregates or other function where the primitives and conditions determine how the Analytical Variables are derived from operational data to produce

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the input data set, (col 12, lines 5-30; categories of said data source), and wherein the Analytic Variables are subdivided into independent variables and their related dependent variables (see col 12, lines 17-22) ;

(b) splitting in the computer the input data set into a test sample and a validation sample (see col 10, line 55 – col 11, line 20);

(c) identifying in the computer the independent variables and their related dependent variables using the test sample (see col 12, lines 5-45);

(d) identifying in the computer a Transformation Type for each of the identified independent variables and their related dependent variables (see col 11, lines 20-65 “estimated density function”);

(e) estimating in the computer a Coefficient for each of the identified independent variables and their related dependent variables (see col 14, lines 55-65 “each element in a decision array there is a gain or loss”);

(f) generating in the computer a Model Equation for each of the identified independent variables and their related dependent variables using the identified Transformation Type and estimated Coefficient (see col 13, lines 5-45 “Gaussian Density function”);

(g) validating in the computer the generated Model Equation by applying it to the validation sample (see col 11, lines 5-20 “calibration”; and

(h) scoring in the computer customers retrieved from a database using the validated Model Equation as a customer promotion response model for use in customer relationship marketing (see col 11, lines 50-67).

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Claim 2, Cook teaches:

wherein the Transformation Type is a mathematical operation that identifies an association between the identified related independent and dependent variables (see col 12, lines 5-45).

Claim 3, Cook teaches:

wherein the Coefficient is a relative measure of the identified related independent and dependent variables contributions to a likelihood of response (see col 12, lines 5-20; col 13, lines 25-45).

Claim 4, Cook teaches:

wherein the Coefficient's sign indicates whether the independent variable is positively or negatively correlated with the dependent variable (see col 14, lines 55-65; "gain or loss").

Claim 5, Cook teaches:

wherein the Model Equation is a mathematical representation of the association of the identified related independent and dependent variables that result in a statistical best fit of known responders versus non-responders (see col 12, lines 5-12).

Claim 6, Cook teaches:

wherein the validating step (g) further comprises applying the generated Model Equation to the validation sample in order to predict a likelihood of response as compared to an actual response in the validation sample (see col 11, lines 5-20; col 13, lines 5-45).

Claim 7, Cook teaches:

wherein the scoring step (h) further comprises applying the validated Model Equation to the customers retrieved from the database in order to predict responses from the customers in a future promotional campaign (see col 11, lines 50-65; col 13, lines 5-45).

Claims 8-14 are written as system claims but contains the same limitations as claims 1-7, therefore, the same rejection is applied.

Claims 15-21 are written as article of manufacturer claims but contains the same limitations as claims 1-7, therefore, the same rejection is applied.

#### **(10) Response to Argument**

The Appellant argues in pages 14-17 of the Brief that Cook does not teach "generating an input data set for the response model, wherein the input data set is generated using an Analytic Data Set Template containing one or more Analytic Variables that includes both primitives, aggregates or other functions, wherein the primitives and conditions determine how the Analytic Variables are derived from operational data to produce the input data set, and wherein the Analytic Variables are subdivided into independent variables and their related dependent variables" because according to the Appellant, Cook does not teach Analytic Data set templates to generate data, that the Analytic Data Set templates contain Analytic Variables and generating its input data sets from operational data using primitives and conditions of Analytic Variables contained within Analytic Data Set Templates. The Appellant further argues that Cook describes data that contains profile feature information but according to the Appellant, Cook does not describe how this data is created, other than by profiling

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or collecting. The Examiner answers that the Appellant is simply repeating the claimed language by saying that Cook does not teach the claimed language but without interpreting said claimed language. Furthermore, Appellant's specification defines "Analytic Data Set Templates" in a very open way, when said specification recites that a user creates an Analytical set template containing the desired Analytical variables, where said Analytical variables are primitives and conditions and where "Primitives are variables while conditions are predicates, aggregates or other functions" (page 6, line 20 – page 7, line 9). Therefore, according to Appellant's specification, "primitives" are any variable and "conditions" are any type of function, therefore, defining "Analytic Data Set Templates" in a very open way. Cook teaches selecting a test sample or training sample and a validating sample (i.e. unknown sample data) from a data source (see col 8, lines 20-25, col 15, lines 1-12) and where said training and validating data contains analytical variables which contains independent and dependent variables. Appellant's specification mentions in page 6 lines 15-32 that "Analytical variables are comprised of primitives and conditions that describe how the Analytical Variable are derived from the operational data. Primitives are base variables, while conditions are predicates, aggregates or other functions." The Appellant's specification page 6 gives an example, where it recites "for example "Sum of sales" in "Merchandise Department" during "Last 6 months" may identify hundreds of variables. However, the system could create an Analytical Variable by summing a "Sales" base variable (i.e. primitive) associated with multiple primitives (e.g. Department and Transaction Date variables) and conditions (e.g. Department = "Merchandise" and Transaction date > "February 1, 2001").



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Thereafter, the user creates an Analytical Data Set Template containing the desired Analytical Variables required for a specific analysis task". Therefore, according to the Appellant's specification, said limitation of "Analytical Variables that include both primitives that are base variables and conditions that are predicates, aggregates or other functions that describe how the Analytical Variables are derived from operational data" simply means, according to Appellant's specification, selecting the Analytical variables from base variables by applying some type of condition selection to said base variables. Appellant's specification only recites "that conditions are predicates, aggregates or functions" and nothing else. Cook teaches selecting a base variable category (i.e. buyer/non-buyer) and applying some type of selection function to said data, which for example, is "n selected individuals' related data is removed from the training data structure" in order to create Analytical variables to be used in a density function for each category based on the training data structure with the selected individual's data removed" (see col 3, lines 30-40). Cook teaches applying conditions to primitive data (i.e. categories) in order to determine which analytical variables to use in order to predict if buyers/non buyers, therefore, creating an Analytical Set template. Furthermore, Cook teaches that that data source may include independent (i.e. profile features such as buy or not buy) and dependent variables (i.e. category into which a profile individual falls) (see col 12, lines 10-30). Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed limitation.

The Appellant argues in page 17 of the Brief that Cook does not teach "splitting the input data set into a test sample and a validation sample". The Examiner answers

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that the Appellant is simply repeating the claimed language by saying that Cook does not teach the claimed language but without interpreting said claimed language. Cook teaches selecting (i.e. generating) a test sample (i.e. training sample) and a validation sample (i.e. unknown sample) from a data source (see col 15, lines 1-15; col 8, lines 20-25). Cook teaches performing a calibration process to determine the accuracy of a forecast (i.e. validating the unknown sample) (see col 11, lines 5-67). Therefore, contrary to Appellant's argument, Cook teaches "splitting" the data source into a training sample and a validation sample.

The Appellant argues in page 19 of the Brief that Cook does not teach "identifying independent and their related dependent variables using the test sample". The Examiner answers that Cook teaches identifying independent and dependent variables from a test or training sample (see col 12, lines 15-25). Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed invention.

The Appellant argues in pages 21 and 27 of the Brief that Cook does not teach "identifying a Transformation Type for each of the identified independent and their related dependent variables where the transformation type provide the strongest association between the identified related independent variable and the dependent variables and generating a Model Equation for each of the identified independent and their related dependent variables using the identified Transformation Type and estimated Coefficient". The Examiner answers that Cook teaches probability density functions that result in normal or quadratic decision surfaces (see col 10, lines 1-10), where said density function is used to create a decision array (see col 3, lines 45-55)

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and where each element of the decision array there is a gain or loss (see col 14, lines 55-65) which shows an association between the identified related independent variables (i.e. individual profile features see col 10, lines 55-65) and the dependent variables (i.e. category into which a profile individual falls) (see col 12, lines 10-30). The Appellant further argues in page 24 of the Brief that Cook does not teach a transformation type because Cook's density function relates to the "distribution" of independent variables among categories, whereas Appellant's model equations relates to why (mathematical) an associated independent variable is associated with a particular dependent variable. The Examiner answers that the Appellant is arguing about limitation not stated in the claims when he mentions that Appellant's claims recite "why" a variable is associated with another. Cook teaches said association between independent and dependent variables in col 12, lines 10-25). Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed limitation.

The Appellant argues in page 25 of the Brief that Cook does not teach "estimating a Coefficient for each of the identified independent and their related dependent variables". The Examiner answers that Cook figures 12 and 13 teach estimating coefficients (i.e. density value) for each independent and dependent variable of said graph. Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed limitation.

The Appellant argues in page 30 of the Brief that Cook does not teach "validating the generated Model Equation by applying it to validation sample". The Examiner answers that Cook teaches performing a calibration (i.e. validation) process to a

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validation sample (i.e. unknown sample) to determine the accuracy of a forecast (see col 11, lines 5-67). Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed invention.

The Appellant argues in page 31 of the Brief that Cook does not teach "scoring customers retrieved from a database using a Model Equation as a customer promotion response model for use in customer relationship marketing". The Examiner answers that Cook figures 12 and 13 teach determining the relative density value (i.e. score) for each individual category, feature and category. Therefore, contrary to Appellant's argument, Cook teaches Appellant's claimed limitation.

The Appellant argues in pages 33-36 that Cook does not teach Appellant's claims 2-7, 9-14, 16-21 due to the dependency to claims 1, 8 and 15 and because Cook does not teach claimed limitations already mentioned in previous Appellant's arguments. The Examiner answers that Appellant's arguments with respect to claims 2-7, 9-14 and 16-21 were already addressed in the above paragraphs in this section Response to Arguments.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/DANIEL LASTRA//D. L./

Primary Examiner, Art Unit 3688

/R. W./

Robert Weinhardt

Supervisory Patent Examiner, Art Unit 3688